

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY (Chapter I of the Patent Cooperation Treaty)

(PCT Rule 44bis)

Applicant's or agent's file reference P2004-014PCT	FOR FURTHER ACTION	See item 4 below
International application No. PCT/JP2005/005909	International filing date (<i>day/month/year</i>) 29 March 2005 (29.03.2005)	Priority date (<i>day/month/year</i>) 30 March 2004 (30.03.2004)
International Patent Classification (8th edition unless older edition indicated) See relevant information in Form PCT/ISA/237		
Applicant TAMURA CORPORATION		

1. This international preliminary report on patentability (Chapter I) is issued by the International Bureau on behalf of the International Searching Authority under Rule 44 bis.1(a).
2. This REPORT consists of a total of 7 sheets, including this cover sheet.

In the attached sheets, any reference to the written opinion of the International Searching Authority should be read as a reference to the international preliminary report on patentability (Chapter I) instead.

3. This report contains indications relating to the following items:

- | | | |
|-------------------------------------|--------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <input checked="" type="checkbox"/> | Box No. I | Basis of the report |
| <input type="checkbox"/> | Box No. II | Priority |
| <input type="checkbox"/> | Box No. III | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability |
| <input checked="" type="checkbox"/> | Box No. IV | Lack of unity of invention |
| <input checked="" type="checkbox"/> | Box No. V | Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement |
| <input type="checkbox"/> | Box No. VI | Certain documents cited |
| <input checked="" type="checkbox"/> | Box No. VII | Certain defects in the international application |
| <input checked="" type="checkbox"/> | Box No. VIII | Certain observations on the international application |

4. The International Bureau will communicate this report to designated Offices in accordance with Rules 44bis.3(c) and 93bis.1 but not, except where the applicant makes an express request under Article 23(2), before the expiration of 30 months from the priority date (Rule 44bis .2).

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No. +41 22 338 82 70	Date of issuance of this report 19 October 2006 (19.10.2006) Authorized officer <div style="text-align: center; font-weight: bold;">Yoshiko Kuwahara</div> e-mail: pt07@wipo.int
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PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To:

TRANSLATION

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

To:		Date of mailing (day/month/year)
Applicant's or agent's file reference P2004-014PCT		FOR FURTHER ACTION See paragraph 2 below
International application No. PCT/JP2005/005909	International filing date (day/month/year) 29.03.2005	Priority date (day/month/year) 30.03.2004
International Patent Classification (IPC) or both national classification and IPC		
Applicant TAMURA CORPORATION		

<p>1. This opinion contains indications relating to the following items:</p> <table style="width: 100%;"> <tr> <td style="width: 5%; text-align: center;"><input checked="" type="checkbox"/></td> <td style="width: 30%;">Box No. I</td> <td>Basis of the opinion</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td>Box No. II</td> <td>Priority</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td>Box No. III</td> <td>Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</td> </tr> <tr> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td>Box No. IV</td> <td>Lack of unity of invention</td> </tr> <tr> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td>Box No. V</td> <td>Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td>Box No. VI</td> <td>Certain documents cited</td> </tr> <tr> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td>Box No. VII</td> <td>Certain defects in the international application</td> </tr> <tr> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td>Box No. VIII</td> <td>Certain observations on the international application</td> </tr> </table>		<input checked="" type="checkbox"/>	Box No. I	Basis of the opinion	<input type="checkbox"/>	Box No. II	Priority	<input type="checkbox"/>	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability	<input checked="" type="checkbox"/>	Box No. IV	Lack of unity of invention	<input checked="" type="checkbox"/>	Box No. V	Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement	<input type="checkbox"/>	Box No. VI	Certain documents cited	<input checked="" type="checkbox"/>	Box No. VII	Certain defects in the international application	<input checked="" type="checkbox"/>	Box No. VIII	Certain observations on the international application
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<input checked="" type="checkbox"/>	Box No. VIII	Certain observations on the international application																							
<p>2. FURTHER ACTION</p> <p>If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.</p> <p>If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.</p> <p>For further options, see Form PCT/ISA/220.</p>																									
<p>3. For further details, see notes to Form PCT/ISA/220.</p>																									

Name and mailing address of the ISA/JP	Authorized officer
Facsimile No.	Telephone No.

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/JP2005/005909

Box No. I Basis of this opinion

1. With regard to the language, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐

This opinion has been established on the basis of a translation from the original language into the following language

_____, which is the language of a translation furnished for the purposes of international search (under Rule 12.3 and 23.1(b)).

2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:

a. type of material

☐

a sequence listing

☐

table(s) related to the sequence listing

b. format of material

☐

in written format

☐

in computer readable form

c. time of filing/furnishing

☐

contained in the international application as filed.

☐

filed together with the international application in computer readable form.

☐

furnished subsequently to this Authority for the purposes of search.

3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table(s) relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

4. Additional comments:

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Box No. IV Lack of unity of invention

1. ☒ In response to the invitation (Form PCT/ISA/206) to pay additional fees the applicant has:
- ☒ paid additional fees
 - ☐ paid additional fees under protest
 - ☐ not paid additional fees
2. ☐ This Authority found that the requirement of unity of invention is not complied with and chose not to invite the applicant to pay additional fees.
3. This Authority considers that the requirement of unity of invention in accordance with Rules 13.1, 13.2 and 13.3 is
- ☐ complied with
 - ☐ not complied with for the following reasons:
- The "special technical feature" of the inventions of claims 1-20 relates to heating by applying hot air below a substrate or a fixture through an opening in a platform blocked by the placement of the substrate or fixture thereon." The "special technical feature" of the inventions of claims 21-35 relates to "forming soldering bumps by heating or reflowing from a substrate side a prescribed soldering composition on the substrate provided with a plurality of pad electrodes." These inventions are not in a technical relationship including one or more identical or corresponding special technical features, and are therefore not found to be so linked as to form a single general inventive concept.
4. Consequently, this opinion has been established in respect of the following parts of the international application:
- ☒ all parts
 - ☐ the parts relating to claims Nos. _____

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

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Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1-35	YES
	Claims		NO
Inventive step (IS)	Claims	1-20, 23, 24, 27, 35	YES
	Claims	21, 22, 25, 26, 28-34	NO
Industrial applicability (IA)	Claims	1-35	YES
	Claims		NO

2. Citations and explanations:

Document 1: JP 11-068303 A (Nihon Dennetsu Keiki Co Ltd), 09 March 1999
 Document 2: JP 11-251737 A (Matsushita Electric Industrial Co Ltd), 17 September 1999
 Document 3: JP 2001-068848 A (Furukawa Electric Co Ltd), 16 March 2001

Regarding Claims 1-20

“Blocking an opening in a platform by placing a substrate or a fixture thereon” in the inventions of claims 1-20 is neither described in any of the documents cited in the ISR, nor is it obvious to a person skilled in the art.

Regarding Claims 21, 22, 25, 26, and 28-34

It would be easy for a person skilled in the art to achieve the constitution of claims 21, 22, 25, 26, and 28-34 of the present application in the device described in documents 1 or 2 cited in the ISR by forming soldering bumps using the soldering composition described in document 3 cited in the ISR.

Further, the “heat conduction” described in claim 25 includes an implication of heat conduction through hot air. A temperature adjustment as described in claims 30-34 is merely a matter of design. The phenomenon described in claims 33-34 merely describes a phenomenon naturally expected due to the temperature difference.

Regarding Claims 23 and 24

Exercising caution so as not to applying hot air to the substrate from the temperature adjusting means as in the inventions of claims 23 and 24 is neither described in any of the documents cited in the ISR, nor it is obvious to a person skilled in the art.

Regarding Claims 27 and 35

Immersing the substrate in a soldering composition in a container as with the inventions of claims 27 and 35 is neither described in any of the documents cited in the ISR, nor it is obvious to a person skilled in the art.

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International application No.

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Box No. VII Certain defects in the international application

The following defects in the form or contents of the international application have been noted:

“The preparatory heating component, the reflow component, and the reflow component” in claim 16 is a mistake for “the preparatory heating component, the reflow component, and the cooling component.”

There is a Japanese typo in paragraph 0066.

“The medium 61 supplied by the heating means 40” described in paragraph 0099 is a mistake for “the hot air 41 supplied by the heating means 40.”

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

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Box No. VIII Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

The technical significance of claim 31 is not fully supported by the specification.